M E M O R A N D U M

TO: AHO FILE

CC: JAMES T. NEWSOM
STELLA DOERING

FROM: ANTHONY J. ANDRADE

DATE: SEPTEMBER 8, 1989

RE: WITNESS VISIT WITH DR. GORDON SNOW

On September 5 Dr. Gordon Snow visited our London office to discuss his continuing review of the medical issues in Aho. Dr. Snow was extremely cordial, and we spent the bulk of the meeting discussing his general impressions of the case based on the medical records abstracts that have been introduced into the record by the plaintiff's attorney.

The following are the salient points of discussion that resulted from the meeting;

1. Although Dr. Snow is careful about the language he uses when discussing the causation issue, it is clear that he believes cigarette smoking is a cause of at least some cases of laryngeal cancer. However, he believes that those who attribute the vast majority of laryngeal cancers to cigarette smoking subscribe to an overly-simplistic view. Several times during the course of our

discussion he stated that the vast majority of lifelong heavy smokers never develop laryngeal cancer, laryngeal cancer appears in non-smokers and laryngeal cancer is a relatively rare disease given the prevalence of smoking in the world today.

2. Dr. Snow believes there are "other factors" at work in the development of both laryngeal cancer and lung cancer. He explained his view by saying that if one draws a map of Europe you see that southern Europe (Italy, Spain, southern France) has the highest rates of laryngeal cancer while northern Europe (Holland, Scotland, northern England) has the highest rates of lung cancer in the world. Dr. Snow pointed out that "this cannot be due to differences in smoking patterns". Obviously, if cigarette smoking is the predominant factor in the development of both laryngeal cancer and lung cancer, one would expect to see higher rates of both laryngeal cancer and lung cancer in the same geographic areas that have heavy cigarette consumption but this is not the case.

3. I showed Dr. Snow the recent information documenting that Mr. Aho was treated for fifty-five days in a tuberculosis sanitarium. Dr. Snow thought that pulmonary tuberculosis early in Mr. Aho's life could be important

in determining the cause of Mr. Aho's current non-malignant lung disease. However, he did not think that one could conclude that Mr. Aho may have had laryngeal tuberculosis based on the available information. Dr. Snow said there is one study that reported a link between prior pulmonary tuberculosis and subsequent laryngeal cancer, and that the relative risk reported was 2.8. The citation for this proposition was Elwood et. al., International Journal of Cancer, "Alcohol, Smoking, Social and Occupational Factors in the Aetiology of Cancer of the Oral Cavity, Pharynx and Larynx". Perhaps Stella could review this article since it may provide evidence that Mr. Aho's pulmonary tuberculosis constitutes another risk factor for his subsequent development of laryngeal cancer.

4. Dr. Snow believes that alcohol is an independent risk factor for laryngeal cancer. His personal experience is that supraglottic laryngeal cancer is more strongly associated with alcohol than cigarette smoking. However, he is well aware of the literature that characterizes alcohol as a "strong co-factor", and he recognizes the existence of literature suggesting that alcohol and cigarette smoking act synergistically to cause laryngeal cancer.

5. The precise location of Mr. Aho's laryngeal cancer will be critical to Dr. Snow's ultimate opinion. He reviewed Mr. Aho's past chart very carefully and was surprised to see "no evidence of pre-operative conventional tomography or CT scans". He is most interested in obtaining translations of any pre-operative reports as well as any medical records that provide staging information.

6. Dr. Snow kept emphasizing the importance of getting accurate date concerning Mr. Aho's use of alcohol. I explained that Mr. Aho's sister testified that he was at most a moderate user of alcohol and this testimony was corroborated by Mr. Aho's first wife. Dr. Snow still thinks we need to nail down with greater precision the amount of Mr. Aho's drinking and the type of alcohol he used.

7. Dr. Snow did not think that the possibility of laryngeal tuberculosis was very high given the fact that Mr. Aho "did not have laryngeal symptoms or problems for years in between the time of his tuberculosis in the early 1940's and the time of his diagnosis with laryngeal cancer in 1986". Dr. Snow felt that if Mr. Aho had

developed laryngeal tuberculosis in addition to pulmonary tuberculosis in the 1940's he would have had chronic laryngeal complaints from the 1940's through his diagnosis of laryngeal cancer.

8. Dr. Snow is a great believer that there is something important in the relationship between low socio-economic status and the development of laryngeal cancer. We reviewed the information from the case investigation regarding Mr. Aho's early life, and Dr. Snow pointed out that Mr. Aho was poor, probably had a bad diet, did not have the best medical care as evidenced by the fact he lost his teeth and consistently lived in sub-standard housing. Dr. Snow explained that poor socio-economic status is a "marker" for poor dietary habits which he personally believes to be important in the development of laryngeal cancer. Dr. Snow was impressed with the work of Wynder regarding socio-economic status as a risk factor for laryngeal cancer and believes we have enough information on Mr. Aho's social background to claim his social status as a risk factor for his laryngeal cancer.

9. Dr. Snow does not believe that poor dental hygiene is a bona fide independent risk factor for laryngeal

cancer. Based on his experience, poor dental hygiene is more likely to be a marker for poor diet, lack of proper health care and general low socio-economic status. He did say that poor dental health is a risk factor for oral cancer.

10. Dr. Snow is aware of the trends regarding the incidence of both lung and laryngeal cancer in Finland. He agreed that the disparate rates between these diseases and dissimilar disease curves over time suggests "something else is going on and the simple claim that cigarette smoking causes most lung cancer and laryngeal cancer is erroneous".

11. Dr. Snow also commented that he believes that personal constitution or genetics is a big factor in determining of who does or does not get laryngeal cancer.

12. Dr. Snow was not aware of some of the recent information we have obtained regarding Mr. Aho's occupational exposures. I explained that Mr. Aho worked for ten years as a side polisher in a shoe factory, as a carder for four years in a cotton textile factory and as a miner for three years in a Swedish mine. Dr. Snow needs some bolstering in the area of occupational

exposures. He believes that duration of exposure is important and did not see any of these occupational exposures as being particularly important because of their relatively short durations. I made the point that one could argue Mr. Aho has had a cumulative exposure to a number of risk factors for laryngeal cancer and Dr. Snow agreed with this position. I promised to send Dr. Snow literature on increased risks of laryngeal cancer among leather workers and textile industry workers.

12. Dr. Snow reviewed the testimony of three plaintiff's experts: Drs. Laurema, Poppius and Rampela. He thought there positions were extreme. He volunteered that Dutch or English doctors would not take such hard and fast positions regarding causation.

13. Dr. Snow was disappointed to learn that Mr. Aho had not worked in a nickel mine. Dr. Snow had reviewed some epidemiology that indicated nickel mining was important in the development of laryngeal cancer, and he commented that he was most impressed with this data and that it "almost proved" that nickel exposure was a cause of laryngeal cancer. In view of the nickel mining data, Dr. Snow did not think Mr. Aho's exposure in the iron and dolomite mines was particularly significant.

14. Dr. Snow was extremely interested in the reasons why the Aho case had been brought, and I explained the connection between Mr. Aurejarvi's anti-smoking involvement and the filing of the case.

15. Dr. Snow still thinks it is important to have a pathologist review the slides, but he cautioned me that the chances are we will not find out anything other than it is a typical squamous cell cancer. Dr. Snow is aware of the HPV connection to laryngeal cancer and thinks it is worth pursuing. He renewed his promise to introduce us to pathologists on his staff who would be willing to review the slides.

16. We discussed the prevalence of drug abuse in Amsterdam and the role of the addiction issue in the cigarette products liability cases. I explained the industry position on addiction and asked Dr. Snow to think about colleagues he knows in the drug abuse treatment area who might be willing to meet with us and discuss the addiction issue.

17. We traced the claim of a potential lung cancer in Mr. Aho's right lung through the available medical records

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and, Dr. Snow seems to feel that this most likely was a pneumonic process which has resolved itself. The fact that Mr. Aho is in apparently good health at this moment supports the view that the density seen in the tip of his right lung is not a lung cancer.

This was only my second meeting with Dr. Snow, and I was frankly surprised at how friendly and cooperative he was. I believe our involvement with Dr. Skolnik and the conversations that Dr. Skolnik and Dr. Snow have had have resulted in Dr. Snow's going out of his way to do whatever he can to be helpful. While I recognize that Dr. Snow will not completely maintain the industry position on the ultimate question of causation I think there is an excellent possibility that we could get a strong written statement from him regarding the specific facts of the Aho case to the effect that there are enough confounding risk factors present in Mr. Aho's medical background that it is impossible to discern with any degree of medical certainty which if any of the risk factors identified in his background was the cause of his laryngeal cancer.

I promised to send to Dr. Snow the following: (1) literature regarding the risk for laryngeal cancer in textile workers and leather industry workers, (2) a transcript of the most

recent investigation report and expert testimony, and (3) the Nordic Cancer Registry graphs.

AJA